

**2004 –2014 Occupational Projections**

<b>Occupational Title</b>	<b>Minimum Education Requirements</b>	<b>** Total Annual Demand</b>	<b>1<sup>st</sup> Quarter 2006 Average Hourly Wage</b>
Weighers, Measurers, Checkers, and Samplers, Recordkeeping	Short-term Tng. & Exp.	30	\$11.42
Surveying and Mapping Technicians	Mod.-term Tng. & Exp.	50	\$13.35
Civil Engineering Technicians	Associate degree	60	\$18.71
Electrical and Electronic Engineering Technicians	Associate degree	50	23.12
Chemical Technicians	Associate degree	50	21.77
Mechanical Engineers	Bachelor's degree	80	\$32.72
Industrial Engineers	Bachelor's degree	70	29.27
Civil Engineers	Bachelor's degree	60	32.64
Environmental Scientists and Specialists, Including	Bachelor's degree	40	23.39
Petroleum Engineers	Bachelor's degree	40	44.18
Geoscientists, Except Hydrologists and	Bachelor's degree	40	40.80
Environmental Engineers	Bachelor's degree	30	33.07
Electrical Engineers	Bachelor's degree	30	34.13
Chemical Engineers	Bachelor's degree	30	42.25
Chemists	Bachelor's degree	30	28.12
Engineering Managers	Wk Exp.+ Bachelor's or higher degree	50	\$52.05

\*\*Total Annual Demand = Demand in the occupation as a function of replacement demand (retirements + turnover) + new growth.

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**Occupations in the Spotlight**

**Chemical Plant and System Operators**



Control or operate an entire chemical process or system of machines.



- ◆ Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods
- ◆ Knowledge of chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo
- ◆ Knowledge of the practical application of engineering science and technology

**Required WorkKeys® Scores:**

**AM LI RI**  
**6 4 5**

**Surveying and Mapping Technicians**



Perform surveying and mapping duties, usually under the direction of a surveyor, cartographer, or photogrammetrist to obtain data used for construction, mapmaking,

- ◆ Knowledge of the practical application of engineering, science, and technology
- ◆ Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models
- ◆ Knowledge of computer hardware and software

**Required WorkKeys® Scores:**

**AM LI RI**  
**5 4 4**

**AM = Applied Mathematics**

**LI = Locating Information**

**RI = Reading for Information**

**WorkKeys® assessments** give students and workers reliable, relevant information about workplace skill levels. Combined with information about skill levels required for jobs, assessments information can help students make better career and educational decisions. Louisiana uses three WorkKeys® assessments as the foundation for awarding career readiness certificates. For more information, contact the Workforce Education and Training Office at the Louisiana Board of Regents (225-342-4253).

**LOUISIANA Opportunities in**



*This diverse Career Cluster prepares learners for careers in planning, managing and providing education and training services, and related learning support services.*

**FASTEST GROWING JOBS**

- 👤 Mechanical Engineers
- 👤 Industrial Engineers
- 👤 Civil Engineers
- 👤 Civil Engineering Technicians
- 👤 Engineering Managers
- 👤 Electrical and Electronic Engineering Technicians
- 👤 Surveying and Mapping Technicians
- 👤 Chemical Technicians Environmental Scientists and Specialists, Including Health

**Louisiana Department of Labor Office of Occupational Information Services**

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TDD Toll Free (866) 277-9317  
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"This document was produced as a collaborative endeavor between the Louisiana Departments of Labor, Education and the Board of Regents".

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## Reference Center:

Louisiana Department of Labor -  
<http://www.LAWORKS.net>

Occupational Information – go to Career Exploration  
<https://www.voshost.com/default.asp>

Louisiana Employment Outlook -  
[http://www.laworks.net/LaborMarketInfo/LMI\\_employmentprojections.asp](http://www.laworks.net/LaborMarketInfo/LMI_employmentprojections.asp)

Louisiana Technical Colleges -  
<http://www.ltc.edu/home.asp>

Financial Aid-  
<http://www.osfa.state.la.us/>

Louisiana Board of Regents-  
<http://www.regents.state.la.us>

Louisiana Community & Technical College System  
<http://www.lctcs.net/>

ACT  
<http://www.act.org>

National Career Clusters  
<http://www.careerclusters.org>



*This brochure is designed to provide assistance to students as they prepare to make decisions about course selection, their career options and future plans.*

**The Career Options Law (Act 1124)** mandates that all high school students have a five-year educational plan and that all high schools offer career majors/areas of concentrations. It is the intent of the law that students have a focus while in school to help make learning more relevant and meaningful.

Students in 6th – 8th grades must complete at least six career awareness activities which help students to develop a five-year educational plan. It also requires school systems to offer areas of concentrations to address students' interests.

**The Five-Year Educational Plan** Students must complete this plan at the end of their 8th grade year with input from their counselor and/or advisor and family. This plan must be reviewed and revised on an annual basis throughout high school with student, parent and counselor/advisor signatures each year.

## Science, Technology Engineering and Math Cluster\ High School Areas of Concentrations (2007 – 2008)

**Diploma Endorsements** will help provide for students the preparation necessary for college and/or a career. By the same token employers will be getting better prepared workers, and higher education institutions will have students better prepared for success in their post secondary institutions. These endorsements help students to maximize their 11th and 12th grades, encourage more students to take Advanced Placement courses, encourage students to take advantage of career and technical education courses and opportunities, as well as hold high schools accountable for what is taught during the 11th and 12th grades. Students can complete the necessary requirements for two different diploma endorsements:

- Academic Endorsement
- Career and Technical Endorsement

Please see your guidance counselor for further details.

**The Louisiana WORKReady! Certificate** is a portable credential that signifies to an employer that an individual has achieved acceptable levels in the foundation skills necessary for success in the workplace and gives Louisiana citizens a “key to work”. Issued by the Workforce Commission, the Certificate is a tool that helps employers identify qualified candidates to fill the openings they have in their businesses.

People who attain the Certificate, which will display their workplace readiness skill levels, will have an advantage as they pursue their career goals. The Certificate increases the likelihood that business will receive a well-trained, highly skilled worker and that education will prepare students for available jobs. For more information, contact the Workforce Commission at 225-342-2094 or the Board of Regents at 225-342-4253.

### Career Cluster

Science, Technology, Engineering and Mathematics

### Areas of Concentrations

Drafting  
Engineering

### Post Secondary Programs

Architectural Engineering  
Drafting and Design  
Interior Design  
Landscape Architect  
Engineering  
Civil Engineering  
Computer Engineering  
Electronics & Electrical Engineering

### Training Programs Related

#### Certification(s):

Certified Electronic Technician  
ADDA  
Certified Electronic Technician

For more information on course selection visit our Web site:

<http://www.doe.state.la.us/lde/ssa/curricHOME.html>

## TOP EMPLOYING INDUSTRIES

### Industry

(based on North American

Industry Classification System NAICS)

Industry	2004	2014	Number of New Jobs	Percent Change
<b>Professional and Technical Services</b>	<b>72,610</b>	<b>84,742</b>	<b>12,132</b>	<b>16.7%</b>